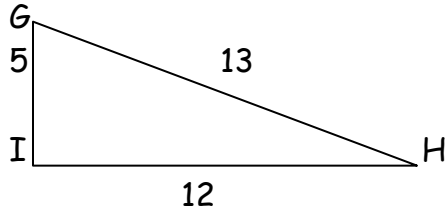


1) Triangle GHI is a right triangle with right angle I . Find the following values:



a) $\sin H =$

b) $\tan H =$

c) $\cos G =$

d) $\sec G =$

e) $\cot H =$

f) $\csc G =$

2) If $\cot\theta = \frac{1}{2}$ find the exact values of the other five trig functions.

3) Solve right triangle ABC given that $m\angle A = 55^\circ$, $m\angle C = 90^\circ$, and $a = 19$.

4) A ramp in a multistory parking deck is 62 feet long and rises 11 feet. Estimate the angle that the ramp makes with the horizontal.

5) Solve triangle ABC given that $m\angle A = 57^\circ$, $m\angle B = 60^\circ$, and $b = 53$.

6) Solve triangle ABC given that $a = 16$, $b = 18$, and $c = 13$.

7) Solve triangle ABC given that $m\angle A = 58^\circ$, $a = 26$, and $b = 29$.

8) Find the area of the triangle with $a = 2$, $b = 3$, and $c = 4$.

9) Find the area of the triangle with $a = 11$, $b = 17$, $C = 42^\circ$.

10) A college football pennant is in the shape of an isosceles triangle. The base is 16 in. long. The sides meet at an angle of 35° . What is the area of the pennant?

11) Two observers 1600 m apart on a straight, flat road measure the angles of elevation of a helicopter hovering over the road between them. If these angles are 32° and 50.5° , how high is the helicopter?

12) A triangular wheat field has side lengths 410 ft, 500 ft, and 420 ft. What is the area of the field to the nearest square foot?